

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-11 (cancelled).

Claim 12 (previously presented): A method for detecting a gene mutation comprising:

forming a double-stranded nucleic acid from:

(i) a single-stranded target nucleic acid having a target base composed of one or more continuous bases and two partial sequences thereof with the target base there between;

(ii) two single-stranded detecting nucleic acids complementary to the two partial sequences with the target base there between;

forming a hydrogen bond by the target base and a receptor by inserting a receptor having hydrogen bonding characteristics into the double-stranded nucleic acid; and

identifying the gene mutation where the receptor bonds to the target base.

Claim 13 (previously presented): The method for detecting a gene mutation according to claim 12, wherein the receptor has a heterocyclic aromatic group and is stabilized by the formation of a hydrogen bond to the target base and a stacking interaction with the base adjacent to the receptor to form a pair with the target base.

Claim 14 (currently amended): The method for detecting a gene mutation according to claim 13, wherein the receptor is at least one of a naphthylidine derivative, a quinoline derivative, a pteridine derivative, a coumarin derivative, an indazol derivative, an alloxazine derivative and ~~amyloride~~amiloride.

Claim 15 (previously presented): The method for detecting a gene mutation according to claim 12, wherein the receptor is fixed to a substrate and the double-stranded nucleic acid is formed by dropping on the substrate the single-stranded target nucleic acid and the two single-stranded detecting nucleic acids.

Claim 16 (previously presented): The method for detecting a gene mutation according to claim 15, wherein the gene mutation is identified on the basis of the change of a signal strength of a surface plasmon resonance due to the bond of the target base and the receptor.

Claim 17 (previously presented): The method for detecting a gene mutation according to claim 12, wherein one detecting nucleic acid is fixed to a substrate and the double-stranded nucleic acid is formed by dropping on the substrate the single-stranded target nucleic acid, the other detecting nucleic acid and the receptor.

Claim 18 (previously presented): The method for detecting a gene mutation according to claim 12, wherein the receptor shows fluorescence emitting characteristics and the gene mutation is identified as a change of fluorescence strength of the double-stranded nucleic acid into which the receptor is inserted.

Claim 19 (previously presented): The method for detecting a gene mutation according to claim 15, wherein the receptor shows fluorescence emitting characteristics and the gene mutation is identified as a change of fluorescence strength of the double-stranded nucleic acid into which the receptor is inserted.

Claim 20 (previously presented): The method for detecting a gene mutation according to claim 17, wherein the receptor shows fluorescence emitting characteristics and the gene mutation is identified as a change of fluorescence strength of the double-stranded nucleic acid into which the receptor is inserted.

Claim 21 (withdrawn): A kit for practicing the method of claim 12 comprising:
two single-stranded detecting nucleic acids complementary to two partial sequences thereof with a target base there between in a single-stranded target nucleic acid having the target base composed of one or more continuous bases; and
a receptor having hydrogen bonding characteristics and inserted into a double-stranded nucleic acid formed by the single-stranded target nucleic acid and the two detecting nucleic acids to form a hydrogen bond with the target base.

Claim 22 (withdrawn): The kit for detecting a gene mutation according to claim 21, further comprising a substrate to which the receptor is fixed.

Claim 23 (withdrawn): The kit for detecting a gene mutation according to claim 21, further comprising a substrate to which one detecting nucleic acid of the two single-stranded detecting nucleic acids are fixed.

Claim 24 (withdrawn): The kit for detecting a gene mutation according to claim 21, wherein the receptor shows fluorescence emitting characteristics.

Claim 25 (withdrawn): The kit for detecting a gene mutation according to claim 22, wherein the receptor shows fluorescence emitting characteristics.

Claim 26 (withdrawn): The kit for detecting a gene mutation according to claim 23, wherein the receptor shows fluorescence emitting characteristics.